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ANNUAL REPORT

OF THE

Public Health Department of the
City of Port-of-Spain

FOR THE YEAR

1942

BY

RODERICK MARCANO, M.D. (Lond.); M.R.C.P. (Lond.); D.P.H. (Lond.).
MEDICAL OFFICER OF HEALTH.

TRINIDAD :

PRINTED BY THE GOVERNMENT PRINTER,
GOVERNMENT PRINTING OFFICE,
PORT-OF-SPAIN.

1943.

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*With the Compliments
of
The Medical Officer of Health*

*Port-of-Spain,
Trinidad, B.W.I.*





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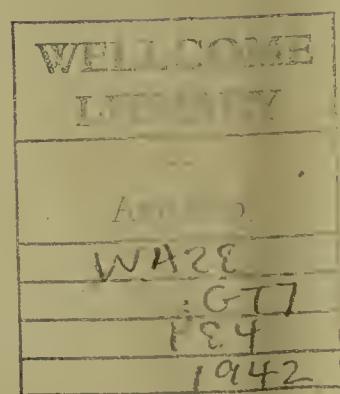
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Local Authority in the Urban Sanitary District of the City of Port-of-Spain.

1941-42.

The City Council.

His WORSHIP THE MAYOR (ALDERMAN TITO P. ACHONG, B.A., M.D., D.T.M., J.P.)

Deputy-Mayor.

COUNCILLOR E. M. MITCHELL.

Aldermen.

H. A. DE FREITAS.

J. M. THORNE.

E. W. HARRIS.

V. R. VIDALE.

Councillors.

N. K. ABLACK.

G. J. McCARTHY.

G. CABRAL.

L. A. PUJADAS.

A. GOMES.

ALFRED RICHARDS.

H. W. HUDSON PHILLIPS, L.L.B.

M. G. SINANAN.

B. T. KYDD.

L. WALCOTT.

J. E. LAI-FOOK.

H. O. B. WOODING.

R. MAINGOT.

R. A. YOUNG.

Annual Report of the Public Health Department of the City of Port-of-Spain, 1942.

CONTENTS.

	PAGE.		PAGE.
Introductory.		Other Principal Causes of Death.	
		Cardiac and Vascular Diseases	... 23
		Cancer and other Malignant Diseases	... 23
Sanitary Circumstances.		Sanitary Administration.	
Water	... 3	Staff	... 24
Scavenging and Refuse Disposal	... 4	Disinfection	... 24
Sanitary Inspection of the District.		Inspection of premises	... 25
Premises used for Human Habitation	... 4	Results of Notices	... 25
Food	... 4	Reports to Water and Sewerage	
Anti-Rat and Anti-Mosquito Measures	... 6	Department	... 25
Vital Statistics of the District.		Anti-Rabies Measures	... 26
Comparative Summary	... 7	Building Plans, &c.	... 26
Births and Deaths	... 8	Prosecutions	... 26
Infant Mortality	... 11	Financial	... 26
Causes of Death of Pre-School Child	... 14	Changes in Staff	... 26
Maternal Mortality	... 15	Leave of Absence	... 26
Prevalence and Control over Infectious Diseases.		Acknowledgments.	
Notifiable Infectious Diseases	... 15	Charts.	
Tuberculosis	... 17	A.—Birth Rates and Death Rates per 1,000	
Enteric Fever	... 18	population 1920-42	... 8
Pneumonia	... 18	B.—Principal Individual Causes of Deaths	
Diphtheria	... 19	1942	... 10
Chicken Pox	... 19	C.—Infant Mortality Rates, 1917-42	... 11
Acute Anterior Poliomyelitis	... 20	D.—Notifications of Infectious Diseases,	
Non-notifiable Diseases	... 20	1922-42	... 16
Malaria	... 21	E.—Pulmonary Tuberculosis—Notifications	
Syphilis	... 21	and Deaths, 1918-42	... 17
Dysentery and Diarrhoea	... 22	F.—Enteric Fever Notifications and Deaths,	
		1918-42	... 18

PUBLIC HEALTH DEPARTMENT,
35, FREDERICK STREET,
PORT-OF-SPAIN,
TRINIDAD, B.W.I.,

25th October, 1943.

URBAN SANITARY DISTRICT OF THE CITY OF PORT-OF-SPAIN.

SECRETARY, LOCAL AUTHORITY

SIR,

I have the honour to submit, for the information of the Local Authority, the Annual Report on the health and sanitary condition of the Urban Sanitary District of the City of Port-of-Spain for the year ended 31st December, 1942.

Though the state of the public health for the year under report cannot be considered unsatisfactory, events like the outbreak of Infantile Paralysis which, commencing in the latter part of 1941, attained its peak in the early part of 1942 and which, by reason of the virulence of the invading organism, occasioned a fair number of deaths, the greatly increased incidence of and the correspondingly increased mortality from infectious diseases generally, the rapidly increasing population which is responsible for a disturbing degree of overcrowding in the central district of the City especially, the acute shortage of housing accommodation, the rising prices of essential foodstuffs, the rising general death rate, all serve to impress upon us very forcibly that unfavourable conditions brought about by the War are beginning to have their effect on the health of the people and to warn us that there is danger ahead, to avert which we should be on the alert and should take the necessary counter-measures by every means at our disposal.

I cannot help confessing to a certain amount of anxiety lest, by being somewhat slow in devising means and ways to meet the situation and by reason of circumstances over which we possibly have no control, we may be caught unprepared.

The mean population has been estimated by the Registrar General to be 99,058, and the end-of-the-year population 100,585, an increase of 1,527 souls, of which number 1,487 represent the natural increase, *i.e.*, excess of births over deaths. There can be no doubt that this figure is a very conservative estimate. We have reason to believe, from figures compiled during the recent Registration Campaign as well as from personal observation of the overcrowding that exists in various premises in the Urban Sanitary District, that there are upwards of 120,000 people residing within the limits of the City.

Total live births numbered 3,399; total deaths 1,912 and deaths under one year 275, giving a birth rate of 34.31, a death rate of 19.30, and an infant mortality rate of 93.84. These figures are, with the prominent exception of the latter, higher than the corresponding rates in 1941: 29.61, 17.48, and 108.73 respectively.

The death rate from notifiable Infectious Diseases per 1,000 population exhibited a notable rise 3.17 as against 2.50 in 1941, due mainly to an increased death rate from pneumonia 1.53 as against .90 in 1941 and from pulmonary tuberculosis 1.37 as against 1.27 in 1941.

The death rate from enteric fever, malaria and syphilis remained practically the same as that for the previous year: .12 as against .14; .25 as against .24; and .11 as against .14 per 1 000 population, but the death rates from the chronic system diseases all showed an appreciable rise on the figures for 1941: diseases of the heart and blood vessels, 2.42 as against 1.79; diseases of the nervous system including cerebral haemorrhage, 1.68 as against 1.55, and cancer and other malignant diseases .85 as against .71 per 1,000 population.

We are confronted with a multiplicity of diverse problems some of which are urgent in the extreme.

The City is still without an adequate supply of water; existing housing accommodation is taxed to the utmost; the eastern section of the City is in pressing need of major works of drainage, of road-making and road-widening, of relaying out of lands for occupation, and for necessary open spaces, &c.—a need that still remains unanswered—; scavenging and sanitation need improvement, and last but not least the nutrition and with it the resistance of the populace leaves much to be desired. These problems, in spite of the difficult and trying times through which we are all passing, can be tackled successfully if we get together, put our shoulders to the wheel and go forward in a spirit of co-operative effort, and I sincerely hope the coming of the New Year will find us actively seeking a solution of these problems and preparing for the period of post-war reconstruction in which the Local Authority will inevitably be called upon to play an important and progressive part.

My sincere and heartfelt thanks are due to His Worship the Mayor, Aldermen and Councillors for the active interest they displayed in the working of the Department and for the active help and ready encouragement they gave in all matters appertaining to the public health that engaged their attention during the year under review, and I take this opportunity of expressing my gratitude for the co-operation and loyal support of the City Engineer's and Town Clerk's Departments without which the work of the Public Health Department would have been rendered exceptionally burdensome.

Common interests and the need for concerted action in common problems during the year 1942 brought Government, the Army and Navy Authorities, British and American, and the Municipality into intimate relationship and close collaboration on health matters, and I am privileged to be afforded the opportunity of recording grateful thanks for the very valuable and effective help given in the many difficult situations that brought us together.

I have the honour to be,

Sir,

Your obedient Servant,

RODERICK MARCANO,

Medical Officer of Health.

SANITARY CIRCUMSTANCES.

Water.

The outstanding feature of the year under this heading is undoubtedly the increasing number of wells which are being sunk for domestic and trade purposes on premises within the Waterworks Area. These wells are being sunk, and sometimes put to use, often without the knowledge, far less the consent, of the Department and great difficulty is often experienced in persuading owners that there is a potential danger in the use of well water which has not been fully and properly tested out chemically and bacteriologically. There can be no doubt as to the need for legislation governing the sinking of wells on private property and defining specifically the standard of safety that is desirable before they be permitted to be brought into general use.

As regards the sources generally, this much can be said with absolute certainty, viz.: that the well sources continue to maintain their well-known high standard of potability, whereas the river sources show their customary seasonal fluctuations with an increasing tendency to a gradual progressive qualitative deterioration which has to be watched closely and offset by stricter methods of purification coupled with increased dosage of sterilising chemical. As a result of observation over a period of years, it is possible to say that no evidence is forthcoming on which to indict the quality of the water which ultimately reaches the consumer, but for reasons beyond our control the catchment areas of the various river sources are not always absolutely above the suspicion that should quite definitely be absent when a commodity like water is being dealt with.

It is clear that with the increasing urbanisation of areas once definitely rural a shifting of intake to points nearer the sources of tributary streams is becoming increasingly imperative.

Bacteriological Examination of Water Supply.

Number of Weekly and Occasional Samples giving Positive Results
(B. Coli present in 100 c.c.)

Where Derived.	BEFORE CHLORINATION.		AFTER CHLORINATION.	
	Total Samples.	No. of Samples with B. Coli present.	Total Samples.	No. of Samples with B. Coli present.
*Maraval (River) ...	—	—	51	12
St. Clair (Pumping Station) ...	66	9	5	1
Quare Flow into Knagg's Hill (Reservoir) ...	—	—	50	17
†St. Ann's (River) ...	—	—	33	3
†Cascade (River) ...	1	1	48	5
†Cocorite (Wells) ...	2	1	42	21
†Diego Martin (Wells) ...	2	1	51	18
†Electric Ice Co. (Wells) ...	3	3	—	—
†Walter's Brewery (Well) ...	5	2	—	—
†Trinidad Trading Ice Co. (Well) ...	1	1	—	—
†Canning & Co. (Well) ...	3	2	—	—
†Alston & Co. (Well) ...	1	1	—	—
†Sanitary Laundry (Well) ...	1	1	—	—
Town Hall (Taps) ...	—	—	5	3
New Camp, H.M.S. Benbow (Tap) ...	—	—	1	1
131, Henry Street (Taps) ...	—	—	8	2
154, Henry Street (Taps) ...	—	—	5	1
Total ...	85	22	299	84

Filtered after Chlorination.

Filtered before Chlorination.

Not filtered.

In Control of the Laboratory

Bacteriological Examination of Water Supply. (Mixed.)

No. of daily samples examined.	No. of samples with B. Coli present (B. Coli in 50 C.C.)	Percentage of Samples with B. Coli present.	No. of samples with B. Coli present (B. Coli in 50 C.C.)	Percentage of samples with B. Coli absent.
365	86	23.56	279	76.44

Scavenging and Refuse Disposal.

The difficulties in the way of maintaining a satisfactory scavenging service and a sanitary method of disposing of refuse during the year under report were legion and the most that can be said is that we succeeded in tiding over the difficulties and in maintaining the City tolerably clean and fairly free from unsightly and dangerous accumulations of rubbish, though it cannot by any means be said that we were satisfied with what was achieved.

In fact, under this heading the effect of wartime conditions was quite unmistakably felt and as I write the position is still most acute.

Men who are willing to undertake scavenging becoming fewer and fewer; those who actually work expressing open dissatisfaction with the wages paid them because of the high cost of living and the relative scarcity of available foodstuffs; mules, carts and trucks that are old and outworn and subject to numerous breakdowns, equipment that is antiquated; a shortage of dustbins and the consequent indiscriminate throwing of litter in streets, lanes, and backyards; unruly drivers of carts and lorries depositing loads of refuse at any point on the dump that is convenient to them and rudely refusing to dump at selected points, thus making it extremely difficult to maintain a sanitary, orderly dump; the multitude of people who frequent the dumps in an effort to salvage foodstuffs and other material that may still be of value—these are some of the factors that have contributed to the difficult time we have experienced and are still experiencing in maintaining this highly essential and indispensable service.

That we have been able to keep carrying on at all in these circumstances is nothing short of a really remarkable feat to those who happen to know the inside of the story.

SANITARY INSPECTION OF THE DISTRICT.

(A) Premises used for Human Habitation, Houses let in Lodgings, Common Lodging Houses.

The shortage of housing accommodation, which has grown more acute during the year under report and may almost be considered an emergency, continues to cause great concern and anxiety to the Department. Overcrowding especially in the central parts of the City proper is such that the introduction of anyone of the dangerous infectious diseases would find a ready soil and conditions entirely favourable for its ready propagation and wide dissemination. The large majority of the down town boarding houses are now nothing less than common lodging houses and steps are being taken to limit, in conformity with the powers of the Ordinance, the number of lodgers and to make them comply with the other requirements of the Regulations.

Even in the suburbs the situation can fairly be described as acute and premises once occupied as cottages have been converted into apartments and even into barracks with all the attendant evils of the barrack system in an accentuated form.

It is obvious, therefore, that herein lies a situation of grave potential danger and yet very little prohibitive or ameliorative action is being taken. Why?

It is clear that firm action under the Public Health Ordinance is likely to create intense hardship and to succeed only in transferring the nuisance from one set of premises to another, from one part of the City to another, without any real abatement, and to avoid such a state of affairs with the untold suffering that is likely to follow in its trail, the Department has been compelled to hold its hand as far as the rigid enforcement of Statutory Notices are concerned, except in those cases where the menace to health is too grave or where the danger to life and limb is too great.

As far as the erection of new houses is concerned, except for the spasmodic and restricted attempts on the part of private individuals, no organised effort has as yet been successful in putting up additional houses in spite of much intensive planning.

HOUSING.

		Resulting from Service of Nuisance Notices.	Voluntarily on Owners' part.	Total.
Barracks and other premises				
reconstructed or reconditioned		11	103	114
Barracks demolished and sites				
left vacant	...	...	1	6
Barracks vacated	...	...	2	3
New Buildings	...	...	—	5
		—	—	5
Total	...	...	14	117
		—	—	131

(B) Premises and Occupations Controlled by Bye-laws and Regulations.

Food.

Food, vital to the health and well being of any community, was the subject at one and the same time of much attention, much acrimony, and much misgiving during the year 1942.

Not that the food situation could be considered unsatisfactory, in fact as compared with other communities abroad the City was fortunate in not having experienced a worse time on the whole, but there were times when the supply of essential foodstuffs was indeed short and serious curtailment of those essential basic foods like milk, butter, eggs, fresh meat, fish, ham and bacon was apparent in the dietary of all classes but particularly the working classes with the inevitable lowering of resistance to disease processes. Happily, measures which were then put into effect to remedy this unsatisfactory state of affairs have borne good fruit and serious shortages seem now to be entirely a thing of the past.

In spite of numerous difficulties, some directly connected with the War that is being waged, the work of the Department directed to the securing of good, clean, wholesome food continued during 1942, and though progress cannot be considered unsatisfactory there is room for great improvement. Itinerant vendors, particularly, were slow in coming in for registration and when they did come in, it was found difficult to attain full compliance with the provisions of the Regulations because of difficulty in obtaining wire netting, hinges, locks, etc., and covers for protection of foodstuffs from contamination by dirt, dust, flies, etc., were less in evidence than in the previous year.

Because of the fact that milk badges for 1942 failed to arrive, fewer milk vendors were persuaded to come in for licence and the number of dairymen's licences issued to cowkeepers and other purveyors of milk were consequently fewer than those issued for the previous year, though this deficiency was offset by an increase in the number of such licences issued to shops, milk bars and refreshment parlours. In spite of the relative scarcity of food, refreshment parlours, foodshops, hotels and particularly restaurants continue to do good business and there were many new places doing this kind of business on the Register. A determined effort was made to keep a strict eye on these places in view of the fact that they formed, in large measure, the happy hunting grounds of sailors, soldiers and airmen, and no outbreak of food poisoning, the result of the consumption of unsound or contaminated food in any of these places, came to the notice of the Department, notwithstanding the decided increase in the amount of tinned foodstuffs of all kinds consumed on such premises.

Sale of Milk Bye-Laws.

DAIRIES AND MILK SHOPS.

Sub-District.					Cowshed Licences Issued.
City proper	...	...	...	...	3
East Dry River	...	...	...	...	—
East Dry River (unsewered)	...	...	...	...	—
Belmont (unsewered)	...	...	...	...	—
Woodbrook (partly unsewered)	...	...	...	...	4
St. James (unsewered)	...	...	...	...	7
	Total	...	...	...	14
	Total 1941	...	...	...	27

DAIRYMEN'S LICENCES.

Dairyman's Licences issued to cowkeepers and other purveyors of milk	...	...	...	...	14
Dairyman's Licences issued to shops, milk bars and refreshment parlours	...	...	...	...	75
	Total	...	...	...	89
	Total 1941	...	...	...	84

MILK VENDORS' LICENCES AND BADGES.

City and Out-Districts.	Milk Vendors' Licences.	Cows Tested.	Tuberculin Badges.
Port-of-Spain	...	89	49
Out-Districts	...	15	56
	Total	104	105
	Total 1941	134	524

Sale of Foodstuffs Bye-Laws.

REGISTRATION OF SHOPS, &c.

Provision, Meat and Spirit Shops, Restaurants, Hotels, Refreshment Parlours	...	...	...	525
Ground Provision and Fruit Shops	...	...	...	16
Bakehouses	...	...	...	37
Confectionery Shops	...	...	...	4
Aerated Water Factories	...	...	...	6
Other Factories	...	...	...	6
	Total	...	...	594
	Total 1941	...	...	510

REGISTRATION OF VENDORS.

					No.
Bread and Cakes	...	...	...	...	33
Confectionery	...	...	...	...	9
Cooked Food including Fries, Souse, etc.	...	...	...	...	16
Meat, Fish and Cheese	...	...	...	...	13
Ice Cream and Palets	...	...	...	...	54
Sweet Drinks	...	...	...	...	20
Vegetables, Greens and Fruits	...	...	...	...	144
Miscellaneous	...	...	...	...	79
					—
			Total	...	368
			Total 1941	...	307
					—
Number of Badges issued to itinerant vendors	...	...	...	...	368 (1941—307)
Number of Oyster Vendors licensed under Sale of Oyster Bye-laws...	...	...	...	...	4 (1941— 3)

A considerable amount of food unfit for human consumption was destroyed in accordance with the Ordinance during the year under report as the table hereunder detailed shows.

In the large majority of these cases the unsound food arrived as such in the Colony and had to be dealt with in His Majesty's Customs, due to the length of time taken by ships in convoy to arrive at this destination. Again, faulty processing and hurried curing, inevitable to wartime conditions, often result in a foodstuff which does not stand up to wear and tear, and rapid deterioration is the result.

Foodstuffs seized and destroyed under Part X (a) of the Public Health Ordinance, Cap. 12, No. 4.

Beef and Pork	(pounds) ...	283	Meats, including veal, ham, corned beef, meat paste, sheep's tongue (tins) ...	2,065
Biscuits and Confectionery	(tins) ...	5	Milk (Condensed and evaporated) ... (Cases) ...	68
Bread	(loaves) ...	177	Onions ... (Crates) ...	3,231
Butter	(tins) ...	7	Plantains ... (tierces) ...	352
Do.	(pounds) ...	48	Potatoes ... (barrels) ...	2,588
Cabbage	(crates) ...	3	Do. ... (crates) ...	44
Cheese	(pounds) ...	33,342	Sausage ... (tins) ...	3
Do.	(boxes) ...	2	Do. ... (cases) ...	140
Fish including sardines, bloaters, herrings, mackerels, Salmon	(boxes) ... (pounds) ... (tins) ... (barrels) ...	14 2,067 3,294 41	Do. ... (pounds) ... Shortening ... (boxes) ...	2,069 2
Flour and Bran	(bags) ...	11	Vegetables, Peas and Soup (tins) ...	1,053
Ham	(pounds) ...	5,823		

(C) Prevalance of Rats and Mosquitoes.

Anti-Rat Measures.

Early in the year under review, as a result of reports of the increased prevalence of cases of bubonic plague in certain cities of Brazil, intensification of the anti-rat campaign was undertaken and additional gangs were detailed to the waterfront areas. In collaboration with the American Army Authorities, who undertook similar intensive work in the harbour areas under their control, this work continued right through the year and still goes on at the moment I write in an effort to prevent the introduction of any rat-borne plague into the Colony. So far, the Colony remains free of any case of this disease.

DESTRUCTION OF RATS AND MICE.

Rats caught by Trappers	...	...	...	...	10,422
Rats bought	...	...	...	...	78
					—
Total	...	...	...	...	10,500

Mice caught and destroyed	4,023
---------------------------	-----	-----	-----	-----	-------

EXAMINATION OF RATS BY GOVERNMENT BACTERIOLOGIST

Rats examined for Plague	...	...	...	...	10,500
Rats found infected with Plague	...	...	...	...	—
Immature Rats not examined	...	...	...	...	—

SPECIES.

		Decumanus.	Rattus.	Total.
Males	...	2,954	2,908	5,862
Females	...	2,416	2,222	4,638
		—	—	—
Total	...	5,370	5,130	10,500

Anti-Mosquito Measures.

Anti-mosquito work continued as usual throughout the entire year, the gangs going from house to house looking for mosquito larvae and adult mosquitoes; inspecting and cleaning eaves-gutters, &c.; oiling pools, the Maraval River; cleaning ravines, silt trenches of grass, &c., &c.; disinfecting and oiling cesspits.

A special gang was detailed to work in the aerodrome area and the contiguous portion of the Cocorite-St. James area, their work being directed to the eradication of all possible breeding grounds of *Aedes aegypti* especially, and a special aedes index was compiled for this particular area.

There was no undue prevalence of mosquito nuisance during the year under review; one feature however, of this work stands out prominently in the greatly increased prevalence of empty tins, always a fertile source of mosquito breeding, undoubtedly connected with the greatly increased consumption of tinned foodstuffs.

Inspection of Eaves Gutters, &c.

Number of Inspections of Premises	...	...	...	70,193
Number of Inspections of Eaves Gutters	...	...	...	17,310
Occasions found in good order	...	...	...	16,586
Occasions found defective	...	...	...	724
Occasions found containing water	...	...	...	110
Occasions found containing water and larvae	...	...	...	184
Occasions mosquito larvae were found in tubs, antiformicas, tin cans, etc.	...	...	...	4,538
Yards cleared of receptacles	...	...	...	4,686

Larval Index.

Year.	Premises with mosquito larvae per cent. of number visited.		
1938	2.58
1939	1.70
1940	1.45
1941	1.83
1942	2.94

VITAL STATISTICS OF THE DISTRICT.

Comparative Summary of Vital Statistics.

(Unless otherwise stated rates are per 1,000 population.)

	1921	1940	1941	1942
Area of City in Acres (pastures and open species included)	1,793	2,540	2,540	2,540
Estimated Population	61,386	92,302	97,531	99,058
Density of Population (persons per acre)	34.2	36.3	38.4	38.6
Total Live Births	1,687	2,937	2,888	3,399
Birth Rate	27.28	31.82	29.61	34.31
Still Births Registered	154	214	211	257
*Still Birth Rate	91.3	72.8	73.0	75.61
Marriages Registered	534	987	1,274	1,882
Marriage Rate	8.64	10.69	13.06	19.00
Total Deaths	1,659	1,568	1,705	1,912
Death Rate	26.83	16.99	17.48	19.30
Natural Increase of Population	28	1,369	1,183	1,487
Deaths under one year	287	291	314	275
*Infant Mortality Rate	170.12	99.08	108.73	93.84
*Maternal Mortality Rate	—	4.09	5.89	3.82
Death Rates :				
Notifiable Infectious Diseases	6.21	2.25	2.50	3.17
Pulmonary Tuberculosis	2.49	1.28	1.27	1.37
Tuberculosis (other forms)	.26	.15	.06	.05
Enteric Fever	1.25	.12	.14	.12
Pneumonia (all forms)	1.97	.68	.90	1.53
Bronchitis	1.36	.48	.46	.66
Diphtheria	.02	.02	.02	.03
Malaria	.89	.20	.24	.25
Syphilis	.21	.38	.19	.14
Diarrhoea and Enteritis	1.91	.79	1.07	.84
Influenza	.26	.01	.04	.04
Ankylostomiasis	.15	.03	.03	.01
Bright's Disease and Nephritis	2.09	.90	1.12	.76
Diseases of the Heart and Blood Vessels	2.65	2.28	1.79	2.42
Diseases of the Nervous System				
including Cerebral Haemorrhage	1.70	1.50	1.55	1.68
Cancer and other Malignant Diseases	.63	.85	.71	.85

*Per 1,000 births.

Births and Birth Rates.
Deaths and Death Rates.

The figures of 34.31 and of 19.30 per 1,000 population represent the highest birth rate and death rate for the City that has been recorded for well over a decade, and there can be no doubt that these figures are a direct reflection of the greatly increased population of the City with the attendant evils of overcrowding, lowered resistance and, very often, inadequate nutrition. Needless to say, the East Dry River District where such conditions are at their worst shows the highest death rate of all the sub-districts—a fact which is well known to the Council and the remedy for which has been so often repeated that no useful purpose would be served by any further attempt at reiteration. Suffice it to say that a Committee of the Council has been appointed to deal with the situation and it is the intention of the Committee to submit a comprehensive scheme for abating the numerous nuisances existing in the East Dry River and Belmont Districts.

Births.

	Months.	Males.	Females.	Both Sexes.	Birth Rate per 1,000 population.
January-March	...	438	404	842	34.47
April-June	...	412	381	793	32.11
July-September	...	434	373	807	32.32
October-December	...	491	466	957	38.33
Total	...	1,775	1,624	3,399	34.31

Deaths.

	Months.	Males.	Females.	Both Sexes.	Death Rate per 1,000 population.
January-March	...	214	214	428	17.52
April-June	...	250	233	483	19.55
July-September	...	268	233	501	20.07
October-December	...	258	242	500	20.03
Total	...	990	922	1,912	19.30

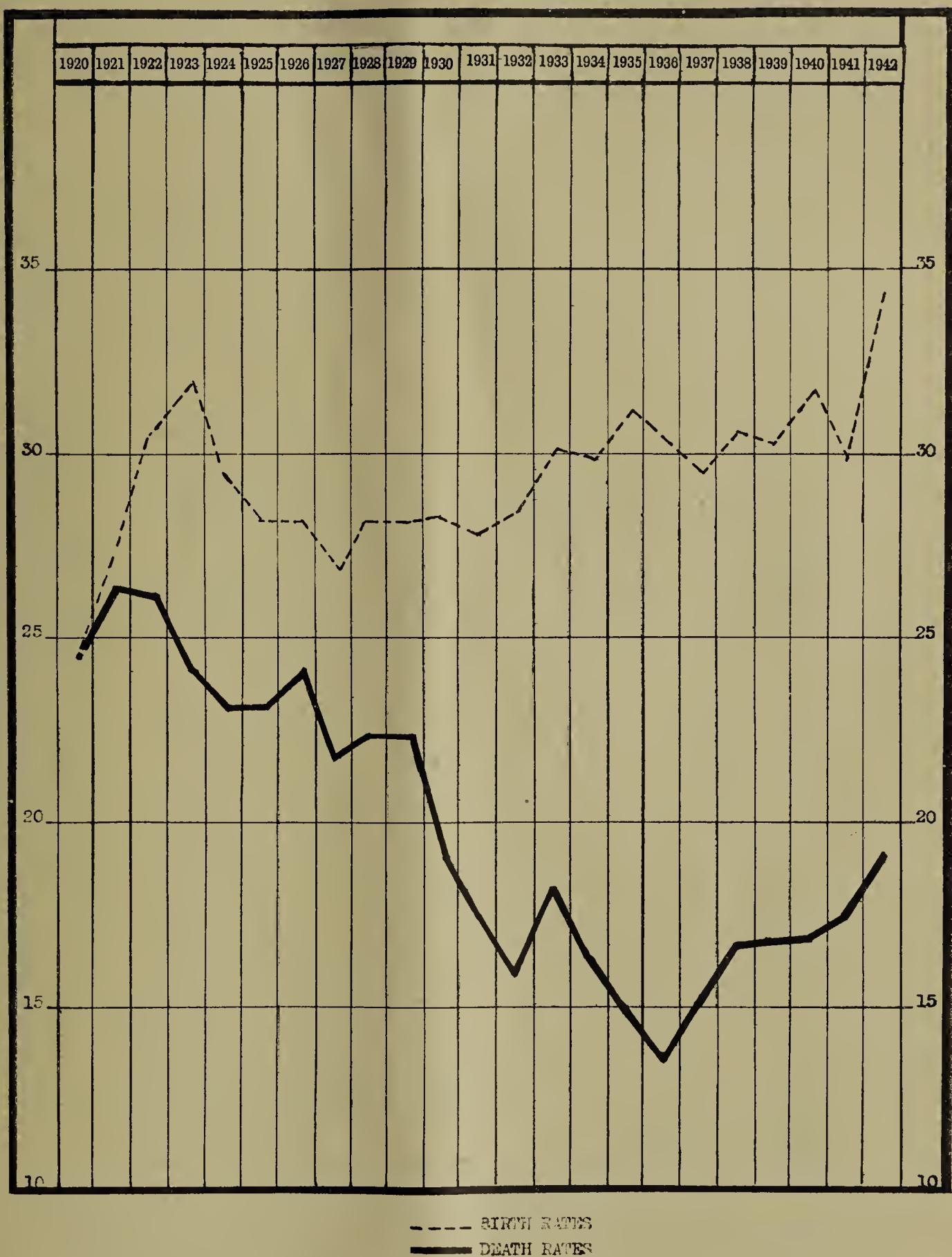
Deaths in Sub-districts of the City.

Sub-District.	Population.	DEATHS.				Total Deaths in Sub-district.	Rate per 1,000 population.
		PLACE OF OCCURRENCE.	Home, &c.	Colonial Hospital.	Royal Gaol.		
City Proper	34,076	284	238	3	—	525	15.41
St. Clair	1,661	7	—	—	—	7	4.21
East Dry River	21,988	241	139	—	—	380	17.28
Belmont	17,130	170	101	—	—	271	15.82
Woodbrook	12,571	105	35	—	—	140	11.14
St. James	11,632	182	69	—	338	589	*50.91
Total	99,058	989	582	3	338	1,912	19.30

* See Table: "Comparison of Death Rates".

Chart A
Port-of-Spain

BIRTH-RATES and DEATH-RATES per 1,000 Population 1920-1942.



Age Distribution of Deaths.

Period.	Males.	Females.	Both Sexes.	Percentage of
				Total Mortality
				at All Ages.
Under 1 year	180	142	322	16.84
1-5 years	36	35	71	3.71
6-10 do.	12	9	21	1.10
11-20 do.	39	39	78	4.08
21-30 do.	59	69	128	6.69
31-40 do.	99	69	168	8.78
41-50 do.	123	85	208	10.88
51-60 do.	146	122	268	14.02
Over 60 years	296	352	648	33.90
Total	990	922	1,912	—

Comparison of Deaths at different Age Periods, 1928-42.

Period.	Total Deaths at All Ages.	DEATHS UNDER 1 YEAR.		DEATHS 1-5 YEARS.		DEATHS 55-60 YEARS.		DEATHS OVER 60 YEARS.	
		No.	Percentage of Total Deaths.	No.	Percentage of Total Deaths.	No.	Percentage of Total Deaths.	No.	Percentage of Total Deaths.
Yearly Averages:									
1928-32	1,327	230	17.42	81	6.06	94	7.09	336	25.10
1933-37	1,167	215	18.24	62	5.29	87	7.57	289	24.74
1938	1,410	204	14.46	69	4.89	107	7.58	484	34.33
1939	1,516	242	15.96	56	3.69	108	7.13	539	35.55
1940	1,568	291	18.56	59	3.76	101	6.44	564	35.97
1941	1,705	314	18.42	85	4.99	113	6.63	594	34.84
1942	1,912	322	16.84	71	3.71	157	8.21	648	33.90

Comparison of Death Rates.

		No. of Deaths.	Death Rate per 1,000 population.
(1) City (St. James excluded)	...	1,323	15.13
(2) City, including St. James	...	1,912	19.30
(3) City, as in (2), but omitting House of Refuge	...	1,574	16.00
(4) St. James (House of Refuge excluded)	...	251	22.96

Causes of Deaths.

I.—GENERAL DISEASES.

(a) Notifiable Infectious Diseases.

Enteric Fever	...	...	12
Diphtheria	...	...	3
Membranous Croup	...	...	—
Pulmonary Tuberculosis	...	...	136
Tuberculosis (other forms)	...	...	4
Pneumonia (all forms)	...	...	152
Ophthalmia Neonatorum	...	...	—
Plague	...	...	—
Cholera	...	...	—
Small Pox	...	...	—
Typhus Fever	...	...	—
Yellow Fever	...	...	—
Encephalitis Lethargica	...	...	1
Acute Poliomyelitis	...	...	3
Acute Ascending Myelitis	...	...	—
Cerebro-Spinal Fever	...	...	—
Puerperal Fever	...	...	3
Anthrax	...	...	—
			314
			—

(b) Non-Notifiable Infectious Diseases.

Malaria	...	...	25
Whooping Cough	...	...	5
Influenza	...	...	4
Dysentery	...	...	9
Ankylostomiasis	...	...	1
Syphilis	...	...	14
Other Venereal Diseases	...	...	1
Black Water Fever	...	...	—
			59
			—

II.—OTHER DISEASES.

(a) General Diseases not included above.

Cancer and other Malignant Diseases	...	84
Pellagra	...	1
Leprosy	...	—
Other General Diseases	...	43
		—
		128
		—

(b) Diseases of the Nervous System and Organs of Special Sense.

Simple Meningitis	...	9
Cerebral Haemorrhage	...	82
Apoplexy	...	7
Convulsions of Children under 5 years	...	13
Other diseases of the Nervous System	...	55
		—
		166
		—

(c) Diseases of the Circulatory System.

Cardiac and Vascular Diseases	...	240
		—

(d) Diseases of the Respiratory System.

Bronchitis	...	...	65
Other diseases of the Respiratory System	...	...	37

(e) Diseases of the Digestive System.

Diarrhoea and Enteritis	...	...	82
Cirrhosis of Liver	...	...	3
Other diseases of the Digestive System	...	...	91
			—
			177

(f) Non-Venereal Diseases of the Genito-Urinary System.

Bright's Disease	...	...	1
Nephritis	...	...	74
Other Non-Venereal Diseases	...	...	83
			—
			158

(g) Diseases of the Puerperal State.
(Other than Puerperal Fevers)

Puerperal Eclampsia	...	...	4
Puerperal Haemorrhage	...	...	—
Other Puerperal Diseases	...	...	6
			—
			10

(h) Diseases of Early Infancy ...

	...	...	124
			—

(i) Old Age ...

	...	...	290
			—

(j) Affections produced by External Causes.

Burns and Scalds	...	...	7
Accidents and Injuries	...	...	35
			—
			42

(k) Other Causes of Death ...

Grand Total	...	...	1,912
			—

Chart B
Port-of-Spain
Principal Individual CAUSES OF DEATHS—1942

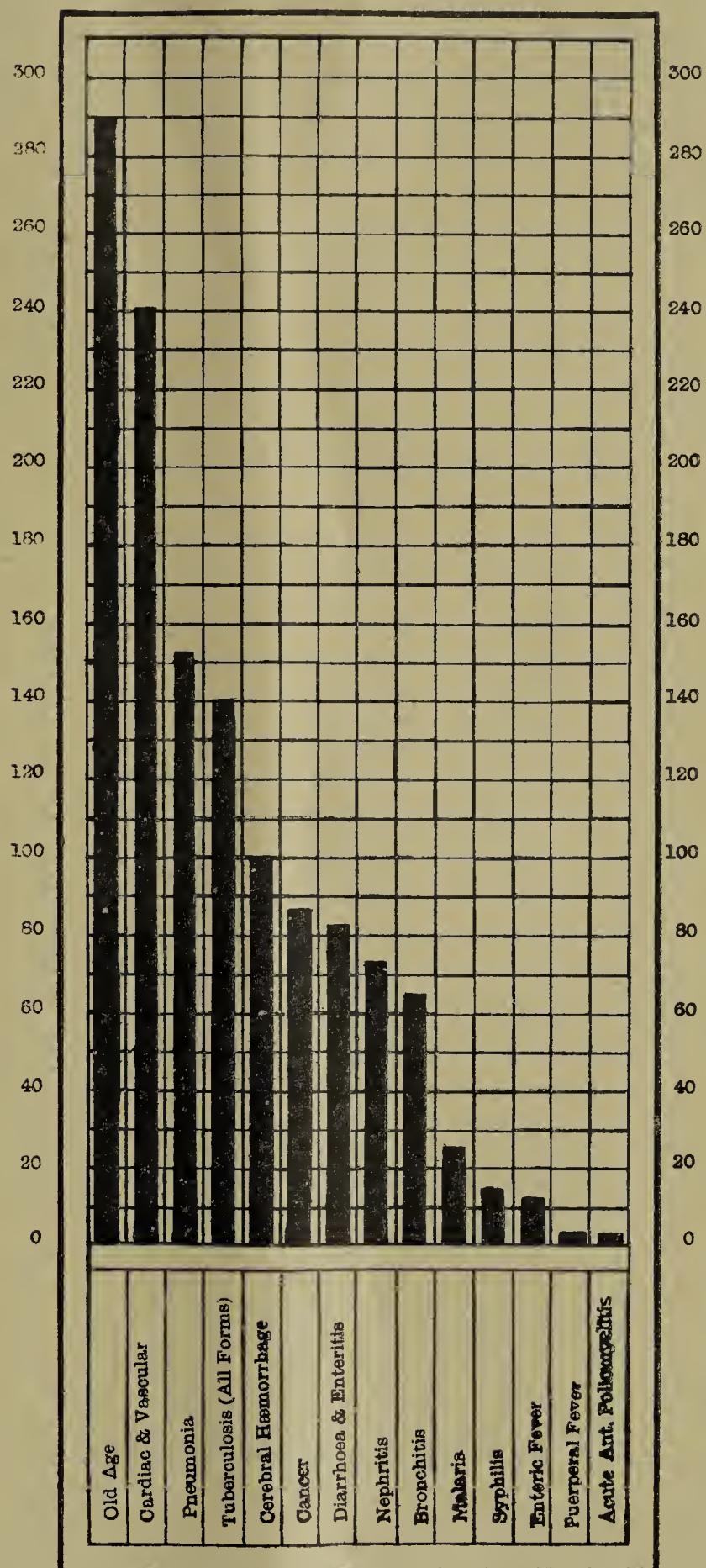
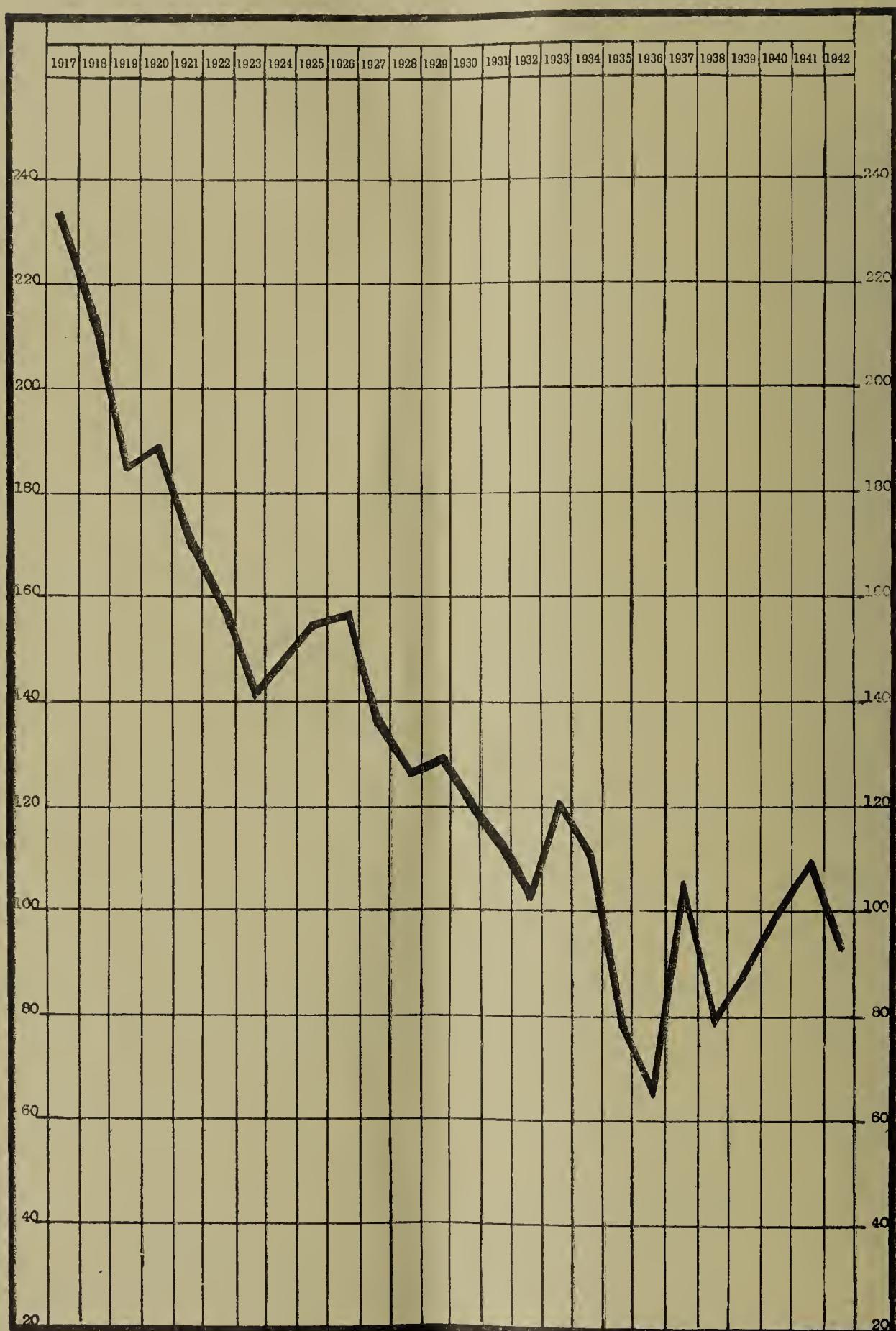


Chart C
Port-of-Spain

INFANT MORTALITY RATES—per 1,000 Live Births, 1917-1942.



INFANT MORTALITY.

Infant Mortality arising as it does from a variety of inter-related causes is a very sensitive index of the general level of sanitation, of the state of nutrition and with it the resistance of the population, of the degree of overcrowding, of the extent to which skilled and prompt maternity and child welfare service is available and of the level of intelligence of any community.

A critical study of the infant mortality is of particular value, therefore, in indicating along what lines effort to improve the general state of health and welfare should be directed.

Examination of the facts and figures detailed in the tables hereunder listed reveals that wastage of life in the neo-natal period, *i.e.*, the first month of the first year of life, is substantial and represents about 41½ per cent. of the total infant mortality—a wastage which is to a large extent avoidable by greater pre-conception care of father and mother and by the greater ante-natal care of mother and child. Comparatively little progress has been made in reducing the ravages of ante-natal disease during the last decade.

The post-natal causes of infant mortality are such as can be more readily and more efficiently stemmed by general measures directed to the improvement of nutrition, the elimination of congestion and overcrowding, to a higher educational and economic level and to a better and higher standard of general sanitation. Whilst it is very likely true that a certain number of deaths of infants is inevitable—often reckoned in terms of mortality as 30 per 1,000—it is also undoubtedly true that a much lower rate than 94.73, the figure for 1942, is attainable, and all measures, specific and general, should be concentrated toward that end.

Infant Mortality.

Births and Deaths of Infants under 1 year, 1917-42.

	Period.	No. of Births.	No. of Deaths under 1 year.	Infant Mortality Rate.
Year 1917	1,770	412	232.77
Yearly Averages :				
1918-22	1,700	310	182.94
1923-27	1,862	274	146.96
1928-32	1,925	230	119.13
Average 1918-32	1,832	271	149.68
Year 1933	2,167	264	121.83
1934	2,185	243	111.21
1935	2,319	181	78.05
1936	2,295	149	64.92
1937	2,273	237	104.26
Average 1933-37	2,248	215	96.05
Year 1938	2,591	204	78.73
1939	2,752	242	87.94
1940	2,937	291	99.08
1941	2,888	314	108.73
1942	3,399	322	94.73
Average 1938-42	2,913	275	93.84

Causes of Deaths under 1 year.

Causes of Deaths.	Neo-Natal Deaths under 1 month.	Deaths 1 month and under 1 year.	Total	Percentage of Total Infant Mortality.
<i>Ante-Natal Causes :</i>				
Congenital Debility	29	19	48	
Prematurity	45	2	47	
Marasmus	—	11	11	
Malnutrition	1	6	7	
Syphilis	1	2	3	
Toxaemia	2	—	2	
Congenital Heart Disease	1	—	1	
Tumour of Umbilical Cord	1	—	1	
Total Ante-Natal	80	40	120	37.27
<i>Intra-Natal Causes :</i>				
Umbilical Haemorrhage	9	—	9	
Cerebral Haemorrhage	5	—	5	
Asphyxia	3	1	4	
Atelectasis	2	—	2	
Cephalhaematoma	—	1	1	
Total Intra-Natal	19	2	21	6.52
<i>Post-Natal Causes :</i>				
Diarrhoea and Enteritis	4	52	56	
Pneumonia	9	34	43	
Bronchitis	3	25	28	
Colitis	1	7	8	
Convulsions	—	8	8	
Icterus Neonatorum	7	—	7	
Pulmonary Congestion	—	3	3	
Dysentery	—	2	2	
Intestinal Obstruction	1	1	2	
Gastric Catarrh	—	2	2	
Whooping Cough	—	2	2	
Malaria	—	1	1	
Pulmonary Tuberculosis	—	1	1	
Other Post-Natal Causes	2	7	9	
Total Post-Natal	27	145	172	53.42
<i>Ill-Defined Causes :</i>				
Unknown	8	1	9	2.79
Grand Total	134	188	322	—

Duration of Life of Infants dying under one year of Age.

Duration of Life.	No. of Infants.	Percentage of total deaths under 1 year.	Corresponding percentage 1941.
Under 1 day ...	20	6.21	6.05
1 day and under 2 weeks ...	95	29.50	30.57
2 weeks and under 1 month ...	19	5.90	7.01
Total under 1 month ...	134	41.62	43.63
1 month to 3 months ...	67	20.81	14.01
Over 3 to 5 months ...	35	10.87	11.78
Over 5 to 7 months ...	40	12.42	11.78
Over 7 to 9 months ...	26	8.07	12.10
Over 9 to 11 months ...	20	6.21	6.69
Over 11 and under 1 year ...	—	—	—
Total ...	322	—	—

Neo-Natal Mortality (Deaths under 1 month), 1930-42.

Period.	No. of Deaths under 1 month.	Percentage of total deaths under 1 year.	Neo-Natal Mortality Rate per 1,000 Births.
Yearly Average : 1930-34	90.6	38.60	44.03
Year 1935 ...	91	50.28	39.24
1936 ...	61	40.94	26.58
1937 ...	110	46.41	48.39
1938 ...	117	57.35	45.16
1939 ...	122	50.41	44.33
Average 1935-39 ...	100.2	49.08	40.74
Year 1940 ...	132	45.36	44.94
1941 ...	137	43.63	47.44
1942 ...	134	41.62	39.42

STILL BIRTHS.

The still birth rate of 75.61 per 1,000 live births is the highest of the previous five years. This rising rate is of some importance to the general welfare of the community and should be closely watched for any possible clue as to its causation.

Still Births.

Year.	Total Still Births.	Rate per 1,000 Live Births.
1942 ...	257	75.61
1941 ...	211	73.06
1940 ...	214	72.86
1939 ...	190	69.04
1938 ...	171	66.00

THE PRE-SCHOOL CHILD.

It is beginning to be realized that just as much care of children between the ages of 2 and 5 years is needed as in the first year of post-natal life. Experience has shown that children entering school at 5 exhibit a variety of defects, physical and mental, which could have been avoided or at least treated successfully, if some kind of organisation for the supervision of these children existed. Unfortunately, round about the age of 18 months the child is lost to doctor and health visitor until the time for entering school arrives. That there is great need for infants' and toddlers' clinics run on orthodox lines where the necessary care and attention can be devoted to this highly important period of the growing child's life is admitted by all workers in the field.

No definite figures are available to indicate the morbidity incidence at this period but an analysis of the table hereunder listed shows that disease in the pre-school child period claims a fairly substantial mortality.

Communicable diseases and diseases of the Digestive System claim two-thirds of the number of deaths at this age period.

Causes of Death at Ages 1-5.

Groups.	Group Total.	Percentage of Total Mortality at Ages 1-5.
<i>Diseases, &c., Attributable to Ante-Natal Causes :</i> Congenital Debility 3, Maramus 3 6		8.45
<i>Communicable Diseases :</i> Pneumonia 13, Malaria 5, Whooping Cough 3, Diphtheria 2, Enteric Fever 2, Polio-Encephalitis 2, Tuberculosis 2 29		40.84
<i>Diseases of the Nervous System :</i> Convulsions 7, Meningitis 1 8		11.27
<i>Diseases of the Respiratory System :</i> Bronchitis 8, Pulmonary Oedema 1 9		12.68
<i>Diseases of the Digestive System :</i> Diarrhoea and Enteritis 11, Colitis 1, Duodenal Ulcer 1, Intestinal Stasis 1, Gastro-Intestinal Haemorrhage 1 15		12.13
<i>Other Causes :</i> Abscess of Thigh 1, Burns 1, Glioma Retinae 1, Nephritis 1 ... 4		5.63
Total *71		—

* M. 36, F. 35.

MATERNAL MORTALITY.

Deaths associated with pregnancy and child bearing should form the subject of careful inquiry by public health workers because they give some indication of the availability and the efficiency of the maternity and child welfare services. Good and prompt care in the pregnancy and child-bearing period reduce the risk of bearing children considerably and should be at the disposal of all potential mothers.

The use of the sulphonamide group of drugs has reduced appreciably that portion of the maternal mortality attributable to puerperal sepsis and to that extent the maternal mortality has been favourably influenced. Very little progress, however, has been made in reducing the toll taken by the other diseases detailed in the table hereunder listed, some of which would yield quite definitely to well known preventive methods.

Causes of Maternal Deaths.

Causes of Maternal Deaths.	Under 16.	16 to 25	26 to 35	36 and upwards	Total All Ages.	Rate per 1,000 Births.	
						1942	Average 1937-41.
Puerperal Sepsis	1	1	1	3	0.88	0.92
Eclampsia	—	3	—	4	1.18	1.22
Haemorrhage	—	—	1	1	0.29	0.65
Pernicious Vomiting	...	—	—	—	—	—	0.24
*Other Causes	—	1	3	5	1.47	2.34
Total	1	5	5	13	3.82	5.37

* "Other Causes" include Ectopic Gestation, Placenta Praevia, Puerperal Insanity.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.

Notifiable Infectious Diseases.

The infectious diseases which are notifiable and to which, therefore, Part XIV of the Public Health Ordinance, Cap. 12. No. 4, apply are now 19 in number, puerperal fever having been added to the list in July, 1941.

They are: diphtheria, membranous croup, enteric fevers, pulmonary tuberculosis, tuberculosis (other forms), pneumonia, ophthalmia neonatorum, chicken pox, encephalitis lethargica, cerebro-spinal fever, acute anterior poliomyelitis (infantile paralysis), acute ascending myelitis and puerperal fever in addition to plague, cholera, yellow fever, small pox (including alastrim) typhus fever, typhoid fever and anthrax which are dangerous infectious diseases and are quarantinable. Typhoid fever and anthrax were proclaimed dangerous infectious diseases in 1937 and 1938 respectively. (Royal Gazette 30th July, 1937 and 2nd June, 1938).

The year under report is of particular interest under this heading in that for the first time during the last nine years the number of cases of infectious disease notified exceed the 600 mark—an occurrence which has been recorded four times only during the last twenty years, viz., 1922, 1924, 1934, 1942. This large increase over the corresponding figure for last year, 614 as compared with 407, is due principally to the great increase in the number of cases of pneumonia notified, 332 as against 138, and to a lesser degree to an increase in the number of notifications of Pulmonary Tuberculosis, 154 as against 113. As I have mentioned at the beginning of this report, the outbreak of Infantile Paralysis which commenced in October, 1941 continued right into the first part of the year and that is reflected in the comparatively great increase in notifications of this disease—26 compared with 15 in 1941, 0 in 1940, 1 in 1937.

Apart from this, the great increase in the number of cases of respiratory disease notified marks the most disquieting feature of this report on Infectious diseases. Why this somewhat sudden increase? Certainly nothing which occurred could be justly termed an epidemic, there was no flare up, there was no universal increase in incidence—an analysis of the tables given below shows that only 1 case was notified from the St. Clair district and 23 from Woodbrook—the facts are that in certain sub-districts there existed conditions which tended to favour the spread of respiratory diseases, pneumonia particularly, and a knowledge of the various districts made it clear that over-crowding, bad housing conditions, the lack of facilities for outdoor life, and malnutrition were really the basic cause of this increased prevalence.

I need hardly repeat that the East Dry River District played true to form, the notification rate per 1,000 population, 8.32, being higher than that of any other sub-district—a fact pointing forcibly to the urgent need for immediate remedial measures.

Corresponding with this great increase in the incidence of notifiable infectious disease was, as is to be expected, a great increase in the death rate from these diseases, 3.17 as against 2.50 per 1,000, of which the major portion was contributed by deaths from pneumonia and pulmonary tuberculosis.

Infectious Diseases—Notifications and Deaths—1932 to 1942.

Infectious Diseases.	NOTIFICATIONS.				DEATHS.			
	Average 1932-36.	Average 1937-41.	1941.	1942.	Average 1932-36.	Average 1937-41.	1941.	1942.
Diphtheria ...	29.8	34.8	30	18	2.2	2.6	2	3
Enteric Fever ...	48.2	61.4	56	37	12.8	12.6	14	12
Pulmonary Tuberculosis ...	147.4	141.6	113	157	118.8	135.8	12	136
Tuberculosis (Other forms) ...	15.4	7.8	3	5	10.6	12.6	6	4
Pneumonia (All forms) ...	154.4	108.	138	332	80.6	73	88	152
Ophthalmia Neonatorum ...	27.6	26.4	28	13	—	—	—	—
Chicken Pox ...	79.8	75.6	20	13	—	—	—	—
Encephalitis Lethargica ...	0.2	0.2	—	—	0.2	—	—	1
Acute Anterior Poliomyelitis ...	0.2	5.6	15	26	—	1	4	3
*Puerperal Fever ...	—	0.8	4	13	—	1.2	6	3
Total ...	503.	461.8	407	614	225.2	238.8	244	314
Rate per 1,000 population ...	6.87	5.28	4.17	6.20	3.07	2.73	2.50	3.17

* Puerperal Fever proclaimed a notifiable infectious disease as from July, 1941.

Distribution of Cases and Deaths from Notifiable Infectious Diseases.

Diseases.	City Proper.		St. Clair		East Dry River		Belmont		Woodbrook		St. James	
	Cases noti- fied.	Deaths	Cases noti- fied.	Deaths	Cases noti- fied.	Deaths	Cases noti- fied.	Deaths	Cases noti- fied.	Deaths	Cases noti- fied.	Deaths
Diphtheria ...	6	—	1	—	3	—	2	3	6	—	—	—
Enteric Fever ...	14	3	—	—	7	3	7	3	2	—	7	3
Pulmonary Tuberculosis ...	56	51	1	—	41	28	29	28	10	13	20	16
Tuberculosis (Other forms) ...	2	1	—	—	—	—	2	2	—	—	1	1
Pneumonia (All forms) ...	100	45	1	—	117	33	53	15	23	9	38	50
Ophthalmia Neonatorum ...	7	—	—	—	4	—	—	—	1	—	1	—
Chicken Pox ...	2	—	5	—	1	—	4	—	—	—	1	—
Encephalitis Lethargica ...	—	—	—	—	—	—	—	1	—	—	—	—
Acute Anterior Poliomyelitis ...	8	1	—	—	5	1	8	1	3	—	2	—
Puerperal Fever ...	1	—	—	—	5	1	4	2	2	—	1	—
Total ...	196	101	8	—	183	66	109	55	47	22	71	70
Rate per 1,000 population in each sub-district	5.75	2.96	4.82	—	8.32	3.00	6.36	3.21	3.74	1.75	6.10	6.02

Notifiable Infectious Diseases—Home and Hospital Deaths.

Diseases.	Died at Home.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentage for the year 1941.
Diphtheria ...	—	3	3	100.00	100.00
Enteric Fever ...	3	9	12	75.00	92.86
Pulmonary Tuberculosis ...	59	77	136	56.62	58.06
Tuberculosis (Other forms) ...	1	3	4	75.00	100.00
Pneumonia (All forms) ...	94	58	152	38.16	44.31
Encephalitis Lethargica ...	1	—	1	—	—
Acute Anterior Poliomyelitis ...	3	—	3	—	75.00
Puerperal Fever ...	—	3	3	100.00	83.33
Total ...	161	153	314	48.73	57.38

Chart D
Port-of-Spain

INFECTIOUS DISEASES—Notifications and Deaths, 1922-1942.

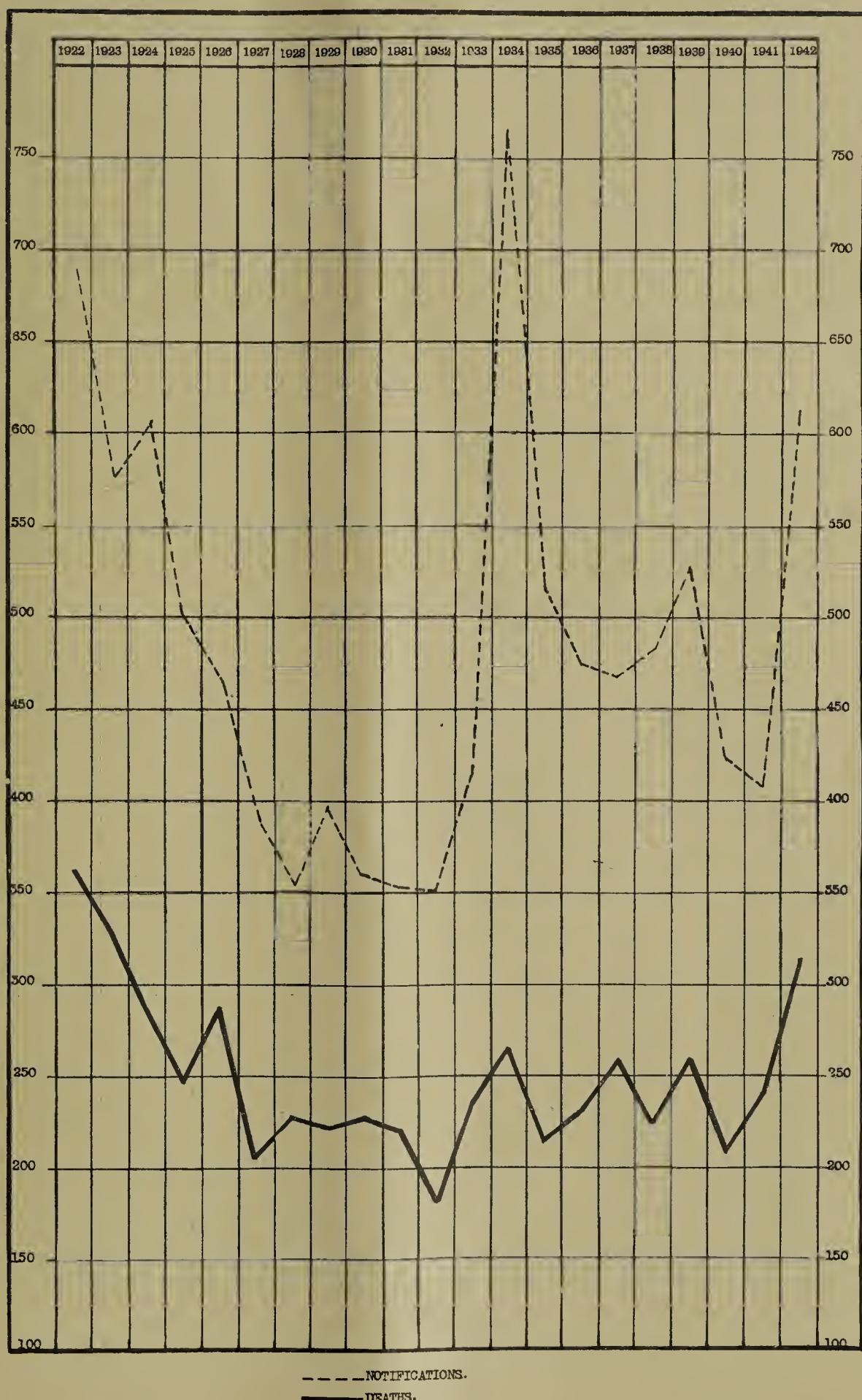


Chart E
Port-of-Spain

PULMONARY TUBERCULOSIS—Notifications and Deaths, 1918-1942.



TUBERCULOSIS.

Pulmonary Tuberculosis.

In view of what has been said earlier in this report under "premises used for human habitation" and "food in relation to health", it was confidently to be expected that a rise in the incidence of and death rate from pulmonary tuberculosis would have taken place in the year 1942 and so it did, fortunately not to the extent that was anticipated, in spite of the fact that the number of cases notified and deaths certified were the highest of the previous three (3) years, 1.37 per 1,000 population.

I need hardly repeat that this disease is intimately associated with poverty, an inadequate and unbalanced diet, bad housing conditions, especially overcrowding, bad ventilation and poor lighting, intemperance and poor general education. Progress in stemming these evils has undoubtedly been made, progress which is reflected in a substantial reduction of the tuberculosis death rate from 3.43 per 1,000 in 1918 to 1.37 in the year under report, but much more can be done and the Local Authority should urge upon Government the urgent necessity for a very close collaboration in a campaign to get rid of these evils that have such a profound bearing on the health of the community. As regards specific measures to combat this disease the position has not altered much from that detailed in my last report. The Committee appointed by Government to take immediate measures to remove open dangerously-infected cases of Tuberculosis away from the Colonial Hospital grounds to a different site, to which I referred, has completed its labours, but so far no action of any kind on this important point has been taken.

It is not right, however, to say that nothing is being done. Government in co-operation with the Colonial Development and Welfare Organisation has secured the services of an expert from England and he is, at the moment, in the Colony making a survey of the disease and working out plans for a wide and closely co-ordinated scheme to include the building of a Sanatorium Hospital, etc., etc.

Pulmonary Tuberculosis—Notifications and Deaths, 1918-42.

Period.	Notifications.	Deaths.	Death Rate per 1,000 pop.
Year 1918 ...	299	233	3.43
Yearly Averages :			
1919-23	207	173.2	2.65
1924-28	167.6	154.6	2.38
1929-33	133.6	129.	1.85
1934-38	147.4	124.6	1.62
Average 1919-38	163.9	145.4	2.13
Year 1939...	175	167	1.85
1940...	155	118	1.28
1941...	113	124	1.27
1942...	157	136	1.37

Non-Pulmonary Tuberculosis—Forms, Notifications and Deaths.

Forms.	Notifications.	Deaths.
Tuberculosis Adenitis	1	—
Tuberculosis of Kidney	1	1
Tuberculosis Meningitis	1	2
Tuberculosis Peritonitis	1	—
Miliary Tuberculosis...	1	1
Total ...	5	4

Deaths from Non-Pulmonary Tuberculosis 1924-42.

Period.	Deaths.	Rate per 1,000 population.
Yearly Averages :		
1924-28	15	0.23
1929-33	15.2	0.22
1934-38	10	0.13
Average 1924-38	13.4	0.19
Year 1939	15	0.17
1940	14	0.15
1941	6	0.06
1942	4	0.04

ENTERIC FEVER.

Typhoid Fever in the City of Port-of-Spain is a disease which is attributable to contaminated food: infected milk, made-up dishes, foodstuffs eaten raw and contaminated by dirt, dust and flies, and I have no doubt that chronic carriers of the organism play their usual important part. There is no evidence at all pointing to the occurrence of water-borne typhoid in the City. With the introduction of Chlorination of the City's water supply in 1924, cases of typhoid fever, which before then used to number 400 - 300 - 250, fell immediately to half that number and have declined steadily since, concurrently with the improvement in general sanitation and with the greater protection of foodstuffs of all kinds from possible contamination.

Though the incidence of this disease on the general population cannot be considered high, the mortality is far too great, being in the vicinity of .12 per 1,000, whereas in modern cities of Great Britain and America the death rate is more like a tenth of this. Thirty-seven cases were notified and 12 deaths certified to typhoid fever in the year under review; the majority of these 37 cases were in juveniles.

Enteric Fever.

Notifications and Deaths, 1918-1942.

Period.	Notifications.	Deaths.	Death Rates per 1,000 population.
Year 1918	495	104	1.52
Yearly Averages : 1919-23	301.8	67.8	1.03
1924-28	162.4	25.2	0.39
1929-33	37	10.8	0.16
1934-38	59.8	14.6	0.19
Average 1919-38	140.3	29.6	0.44
Year 1939	75	15	0.17
1940	70	11	0.12
1941	56	14	0.14
1942	37	12	0.12

Inoculation of Enteric Fever Contacts.
T.A.B. Injections.

No. receiving one injection.	No. receiving two injections.	Total.
31	8	39

PNEUMONIA.

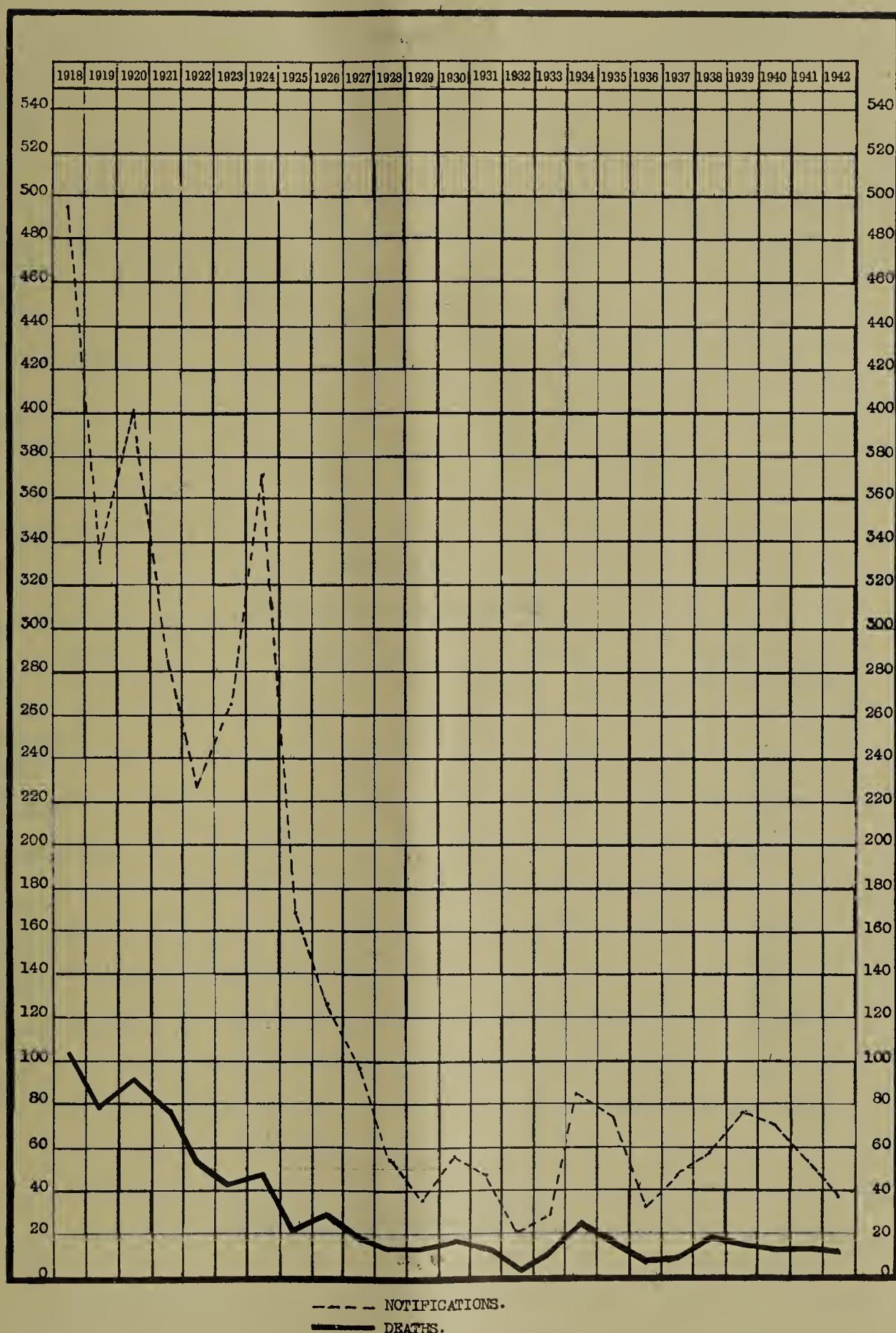
As has been stated before, pneumonia took pride of place in the list of notifiable infectious diseases during 1942 both as regards incidence and mortality. Notifications numbered 332, deaths 152, a death rate of 1.53 per 1,000. The type of the disease was predominantly lobar and the case mortality rate was high, nearly 50 per cent.

It would seem that the invading organisms were of a mixed type—*pneumococcus*, *streptococcus*, Friedladers pneumo-bacillus which may account for the relatively high mortality in spite of the free and early exhibition of the sulphanamide group of drugs.

It is fairly certain that overcrowding, bad ventilation, exposure and alcoholism contributed materially to the spread of this disease and its incidence was greatest in those sub-districts where these insanitary conditions were greatest.

Chart F
Port-of-Spain

Enteric Fever—Notifications and Deaths, 1918-1942



Pneumonia (All Forms).

Notifications and Deaths, 1922-42.

Period.	Notifications.	Deaths.	Death Rate per 1,000 population.
Yearly Averages :			
1922-26 ...	111.8	78	1.23
1927-31 ...	69.8	53.4	0.79
1932-36 ...	155.4	80.6	1.10
Average 1922-36	112.3	70.7	1.04
Year			
1937 ...	125	85	1.10
1938 ...	101	70	0.83
1939 ...	107	59	0.65
1940 ...	69	63	0.68
1941 ...	138	88	0.90
Average 1937-41	108	73	0.83
Year	1942	332	152
			1.53

Diphtheria.

Notifications and Deaths, 1917-42.

Period.	Notifications.	Deaths.	Death Rate per 1,000 population.
Yearly Averages :			
1917-21 ...	11.8	1.4	0.02
1922-26 ...	14.8	2	0.03
1927-31 ...	23.8	1.6	0.02
1932-36 ...	29.8	2.2	0.03
Average 1917-36	20	1.8	0.03
Year			
1937 ...	30	4	0.05
1938 ...	16	3	0.04
1939 ...	61	2	0.02
1940 ...	37	2	0.02
1941 ...	30	2	0.02
Average 1937-41	34.8	2.6	0.03
Year	1942	18	3
			0.03

Chicken Pox—Notifications, 1924-42.

Period.	Notifications.	Period.	Notifications.
Yearly Averages :			
1924-28 ...	19.8	Year 1939...	...
1929-33 ...	41	1940...	...
1934-38 ...	110.4	1941...	...
		1942...	...
			13

ACUTE ANTERIOR POLIOMYELITIS.

The City experienced the worst 'outbreak' of this disease in its history during the year 1942. The outbreak started in October, 1941, and continued on to the end of April, 1942—15 cases were notified in 1941 and 26 in 1942.

At the same time the disease was also unduly prevalent in other parts of the Colony and all told a total of 194 cases were reported.

The type of infection was fairly severe and many cases died of paralysis of the muscles of respiration; those who survived seemed to have made a very good recovery.

Somewhat of a stir was created at the height of the outbreak but the Central Board of Health acted promptly and issued a series of bulletins, through the Information Office, which helped to calm the frayed nerves of the populace.

Acute Anterior Poliomyelitis.

Notifications and Deaths, 1927-42.

Year.	No. of Cases.	Deaths.	Year.	No. of Cases.	Deaths.	Year.	No. of Cases.	Deaths.
1927-29	...	—	1933-35	...	—	1939	...	1
1930	...	5	1936	...	3	1940	...	—
1931	...	—	1937	...	10	1941	...	15
1932	...	3	1938	...	2	1942	...	3

Acute Anterior Poliomyelitis.

Cases and Deaths in Age-Groups, 1942.

	Under 1 year.	1-5 years.	6-10 years.	11-15 years.	21-25 years.	31-35 years.	41-45 years.	Total.
Cases Notified	...	3	11	7	2	1	1	26
Deaths	...	—	2	—	1	—	—	3

Non-Notifiable Infectious Diseases.

The diseases usually considered under this heading are: Malaria, and Blackwater Fever, Dysentery, Syphilis, Ankylostomiasis, Whooping Cough and Influenza. Not being notifiable under the Public Health Ordinance no accurate information as to their incidence is available and their relative prevalence can be gauged only from the returns of deaths certified.

A total of 58 deaths from these diseases was notified in 1942 of which malaria claimed 25 and syphilis 14.

Non-Notifiable Infectious Diseases—Home and Hospital Deaths.

Diseases.	Died at Home &c.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentage for the year 1941.
Malaria	...	12	13	25	52.00
Black Water Fever	...	—	—	—	—
Whooping Cough	...	5	—	5	—
Influenza	...	4	—	4	—
Dysentery	...	8	1	9	11.11
Ankylostomiasis	...	—	1	1	100.00
Syphilis	...	13	1	14	7.14
Total	...	42	16	58	27.59
					45.00

MALARIA.

As has been often stated in these reports malaria is a minor public health problem within the limits of the City.

Twelve years ago in Council Paper No. 97 of 1931, Doctor Eric De Verteuil, at that time Government Malariaologist, as a result of a survey which he conducted writes "... It is obviously not within the purview of this report to make any comments on the control of breeding places in the City of Port-of-Spain—these are dealt with by the Medical Officer of Health, Port-of-Spain—but it is impossible to refrain from commenting on the high pitch of excellence which has been attained by local control of anopheles breeding places by the sanitary efforts of the Government up to 1916 and subsequently by the City Council. The City of Port-of-Spain stands to-day as second to none amongst large tropical towns so far as malaria is concerned and that is due principally, though not solely to local control."

This statement has been amply confirmed by Doctor W. G. Downes of the Rockefeller Foundation who, at the instance of Government, conducted a survey of the malaria problem of the Colony and as part of that survey, investigated malaria incidence and malaria control in the City. In his report he writes as follows: "The Malaria Survey was conducted in the City of Port-of-Spain from January through April, 1941. Examinations were carried out on school children. There were very few observations on mosquito breeding, at least positive observations." "We collected no anopheles larvae within the limits of Port-of-Spain. Certainly if any breeding is going on, it is minimal. A female *A. aquasalis* was captured in the Cascade section of town early in June." (N.B. This area is outside the limits of the City.) "This isolated observation is felt probably to be an example of flight of anopheles from a distant breeding area (*i.e.*, Laventille Swamp) "The coastal boundaries of Port-of-Spain adjoin very malarious areas, on the one side Success Village with the nearby Laventille Swamp, and on the other Diego Martin and the Cocorite Swamp. It is probable that a few cases of malaria are acquired in these areas of town from anophelines flying in from nearby malaria infested areas, but doubtful whether malaria transmission occurs in the central and more western sections of the town."

"Port-of-Spain has low spleen and parasite rates and malaria may be considered a very minor health hazard within the city limits. It is worth noting that both to the north and the south, the City adjoins very malarious areas, namely Success Village and Diego Martin—Cocorite."

From the work of the Department over a large number of years we know this to be a fact. Of course many cases of acute and chronic malaria are to be found in the City but from investigations continuously being made to determine the source of infection, it is possible to say with certainty that 99 per cent. of these cases acquire their infection in malarious areas outside the City.

Malaria—Local Distribution of Deaths.

Sub-districts.								Deaths.
City Proper	...	...	...	...	...	...	...	5
St. Clair	...	...	...	...	...	...	...	...
East Dry River	...	...	...	...	...	...	...	6
Belmont	...	...	...	...	...	...	...	2
Woodbrook	...	...	...	...	...	...	...	3
St. James	...	...	...	...	...	...	...	9
Total	...	...	...	...	...	...	...	25

SYPHILIS.

The problem of syphilis remains the same as I have detailed in my previous reports except that, perhaps, in the year under review it was somewhat accentuated by conditions inevitable to the war that is now being waged, viz., the presence of large numbers of soldiers, sailors and airmen in the port and urban sanitary district. In such circumstances it is difficult to avoid promiscuity and a rise in the incidence of venereal disease is to be expected. As a matter of actual fact, the incidence of venereal disease attained such high proportions that joint action by both American and British Authorities became a necessity and, as I write, the experts, American and Canadian, are formulating plans for a venereal disease campaign throughout the length and breadth of the Colony starting, of course, with the City and larger towns first.

Deaths from Syphilis—1918-42.

Period.	Deaths.	Rate per 1,000 population.
Yearly Averages :		
1918-22	16.2	0.24
1923-27	56.8	0.88
1928-32	28.2	0.41
1933-37	21.8	0.29
Average 1918-37	24.6	0.37
Year—1938	29	0.34
1939	26	0.29
1940	35	0.38
1941	19	0.19
1942	14	0.14

DYSENTERY, DIARRHOEA, AND ENTERITIS.

Often called " bowel filth diseases " these diseases are the result of infected excreta contaminating the food of man and, as can be expected, foodstuffs like green vegetables, fruits, milk, ice cream, made-up dishes which are eaten either raw or just partially cooked are the most dangerous in this particular respect. Protection of foodstuffs from contamination by dirt, dust and flies, the proper disinfection and disposal of excreta, and a pure water supply would reduce considerably the incidence of and mortality from these diseases.

Deaths from the Dysenteries, 1918-42.

	Period.	Deaths.	Death Rates.
Year 1918	...	43	0.63
Yearly Averages :			
1919-23	...	38.2	0.58
1924-28	...	32	0.49
1929-33	...	14.8	0.21
1934-38	...	5.4	0.07
Average 1919-38	...	22.6	0.34
Year 1939	...	2	0.02
1940	...	9	0.10
1941	...	11	0.11
1942	...	9	0.09

DIARRHOEA AND ENTERITIS.

Deaths from Diarrhoea and Enteritis, 1918-42.

	Period.	Deaths.	Death Rates.
Year 1918	...	193	2.84
Yearly Averages :			
1919-23	...	143.6	2.18
1924-28	...	72.8	1.12
1929-33	...	52.8	0.76
1934-38	...	40	0.52
Average 1919-38	...	77.3	1.15
Year 1939	...	45	0.50
1940	...	73	0.79
1941	...	104	1.07
1942	...	83	0.84

Diarrhoea and Enteritis—Deaths in Sub-districts.

	Sub-district.	No. of deaths.
City Proper	...	13
St. Clair	...	—
East Dry River	...	33
Belmont	...	18
Woodbrook	...	2
St. James	...	17
Total	...	83

OTHER PRINCIPAL CAUSES OF DEATH.

A significant increase in the number of deaths certified to Cardiac and Vascular Diseases is the outstanding feature of the report under this heading. There can be no denying the fact that cardiac and vascular disease is exacting a steadily increasing toll on human life in the City and the Colony generally. Next to Infectious Diseases, Cardiac and Vascular Diseases claimed the largest number of victims in the year under review and in spite of the increase in population, the rate per 1,000 population, 2.42 was more than one-third as high again as the rate for 1941—1.79 per 1,000.

It may be argued that an analysis of the table hereunder detailed shows that the greatest number of deaths from cardiac and vascular diseases occurred in the over 60 years group and that the increase in mortality is very likely due to the increasing longevity which better health, better sanitation and a higher standard of living have brought us, but the disquieting feature is that 83 such deaths occurred in the 41-60 group, and, on analysis, it would almost certainly be found that these deaths were the outcome of chronic system diseases of which syphilis is far and away the most important.

I have already spoken to the proposed venereal disease campaign which is about to be initiated. I have great hopes that with a greater appreciation of the havoc that untreated or partially treated syphilis wreaks, a reduction in the incidence of and mortality from its later manifestations on the heart and blood vessels would be effected.

Deaths from Cardiac and Vascular Diseases in Age-Groups.

Forms.	0-20 years.	21-40 years.	41-60 years.	Over 60 years.	Total.
<i>Diseases of Arteries and Valves :</i>					
Aneurism ... ... ...	...	6	21	5	32
Arterio-Sclerosis and Atheroma ...	...	...	...	11	11
Coronary Thrombosis ...	...	1	1	4	6
Mitral and Aortic Incompetence ...	3	7	15	12	37
Other Diseases of Arteries and Valves ...	...	6	3	14	23
<i>Diseases of the Heart :</i>					
Aneurism ... ... ...	...	1	...	...	1
Auricular Fibrillation ...	...	...	2	1	3
Fatty Degeneration ...	...	...	...	1	1
Endocarditis ...	5	3	...	1	9
Myocarditis ...	1	3	12	12	28
Myocardial Degeneration ...	...	1	12	35	48
Angina Pectoris ...	...	1	...	2	3
Other Cardiac Diseases ...	2	5	17	14	38
Total	11	34	83	112	240

CANCER AND OTHER MALIGNANT DISEASES.

The figures given in the table below show an increase in the number of deaths certified to cancer and other malignant diseases on the corresponding figures for 1941—83 as against 69, and incidentally 83 deaths represent the highest number of deaths from these diseases ever recorded in the history of the Local Authority.

The organs of the body most frequently attacked remain the same as have been recorded in all previous reports, viz., breast, uterus, ovary in the female, and tongue, stomach and rectum in the male.

No convincing explanation is forthcoming to account for the rising mortality year by year from this disease.

Cancer and Other Malignant Diseases—Forms, Sites and Deaths.

Forms and Sites.	DEATHS.	
	Males.	Females.
<i>Carcinoma :</i>		
Face, Ear, Maxilla, Neck	3	3
Larynx	1	1
Tongue, Oesophagus, Stomach, Liver, Small Intestines, Colon, Rectum	16	17
Breast, Uterus, Ovary ... ... ...	...	39
Bladder, Prostate	2	...
Site not stated	1	...
<i>Glioma :</i>		
Retinae ... ... ...	...	1
Total	23	61

Deaths from Cancer and other Malignant Diseases, 1918-42.

Period.	Deaths.	Rate per 1,000 pop.
Yearly Averages :		
1918-22	44.4	0.67
1923-27	45.6	0.71
1928-32	44.6	0.65
1933-37	56.8	0.76
Average 1918-37	47.9	0.70
Year 1938	70	0.83
1939	76	0.84
1940	78	0.85
1941	69	0.71
1942	84	0.85

SANITARY ADMINISTRATION.

The number of workers attached to the Public Health Department numbered 106 at the end of 1942, of which 20 were Sanitary Inspectors, apart from the Chief Clerk and the Chief Sanitary Inspector, 2 were clerical assistants, 2 overseers, 1 messenger, 6 assistants to the Sanitary Inspectors of the Districts of ten referred to as "specials", 15 drivers and the rest were labourers.

All these employees, with the exception of the Chief Clerk, two (2) Sanitary Inspectors and two (2) Clerical Assistants who comprise the indoor office staff, are engaged in field work in the various parts of the Urban Sanitary District.

Thirteen (13) Sanitary Inspectors work in the thirteen sanitary districts into which the City is divided, one Sanitary Inspector is in charge of the anti-rabies and water sampling work, one is in charge of disinfection work, one devotes his entire attention to food work and yet another to Building Notices, Plans and Completion Certificates.

The Anti-Mosquito Overseer maps out, records, and supervises the work of the anti-mosquito unit of six (6) "specials", seven (7) drivers, and fifteen (15) men divided into seven (7) groups.

The Anti-Rat-Overseer similarly directs the activities of the anti-rat unit of seven (7) drivers, and 25 men divided into seven (7) groups.

When working in the District of a Sanitary Inspector, these gangs come under the direct supervision and control of the Sanitary Inspector of the District.

The Anti-Rabies unit comprises one driver and seven men, they are under the direction of the Anti-Rabies Inspector.

The Disinfection unit of one driver and six men are under the direction of the Sanitary Inspector in charge of Infectious Diseases.

Disinfection.
Premises, etc., disinfected for Infectious Diseases and Vermin.

Diseases.	Premises sprayed.	Vehicles sprayed.
Pneumonia ...	170	...
Tuberculosis	104	...
Enteric Fever	37	...
Poliomyelitis	24	...
Diphtheria ...	14	...
Puerperal Fever	7	...
Ophthalmia Neonatorum	5	...
Chicken Pox	3	...
Leprosy ...	...	3
Total	364	3
Vermin	426	...

21,488 Cesspits were sprayed with a mixture of crude and distillate oils (free of charge) as a routine measure of prevention against spread of the bowel-filth diseases.

Inspection of Premises, &c., by Sanitary Inspectors.

Average Monthly No. of Visits to Dwellings, Shops and other Premises	...	6,975
Inspection of Stores, Shops, &c.		

	Average Monthly No. of Visits.	Average Monthly No. of Visits.
Provision and Meat Shops	231	Sweet Drink Carts
Provision Stores	39	Dairies and Cowsheds
Restaurants and Cookshops	78	Stables
Bakehouses	40	Goat Pens
Bread Depots	11	Aerated Water Factories
Cake and Ice Cream Shops	255	Soap Factories
Fry Shops	11	Other Factories
Hotels	8	Schools
Markets	4	Common Lodging Houses
Spirit Shops	35	Barber Shops
Ice Cream Carts and Pails	39	Dyeworks
Cake Trays and Baskets	41	Laundries
Provision Trays and Baskets	84	Garages
Bread Carts and Baskets	29	Tanneries
Fresh Fish Trays	31	Public Urinals
Oyster Vendors' Baskets	4	Boats
Plantain Carts	8	

Results of Notices and Verbal Directions.

	Constructed, installed or provided.	Repaired.	Cleansed.	Painted.	Eliminated.	Lime-washed.	Oiled.
Yard pavements	24	64	...	...	...	...	...
Depressions in yards	...	...	...	...	255	...	...
Yards	...	...	3,970	...	...	...	...
Drains, sinks, gullies, washing trough, etc.	203	267	4,790	...	...	...	...
Lavatories, sewer basins, flush tanks, urinals, bath rooms, etc.	155	67	1,771	...	...	...	...
Privies	208	749	...	...	...	582	...
Cesspits	177	100	1,065	...	...	...	825
Manure Heaps	...	...	...	...	405	...	...
Rat Holes	...	...	...	...	43	...	...
Tree Shade, Overgrowths of bush	...	...	...	...	849	...	...
Dustbins	1,381	310	922	...	...	...	...
Dustbin covers	...	...	...	...	...	...	...
Shops, Parlours, Restaurants, Bakehouses, Hotels, etc.	...	38	2,968	166	...	199	...
Aerated Water Factories	...	...	75	...	...	4	...
Bread Carts	...	...	...	19	...	...	...
Barracks, Common Lodging Houses	...	13	14	20	...	13	...
Garage, Kitchens	...	58	...	...	...	68	...
Cowsheds, Stables, Goat Pens	...	44	...	222	...	50	...
Tanneries, Soap Factories, etc	...	...	...	...	...	6	...
Close-boarding, Ventilation of Houses	2	...	...	...	...	...	...
Barber Shops	...	...	68	12	...	...	...

Reports to Water and Sewerage Department.

Reports.	Total.
Leaks, defective taps, chokes, &c. ...	1,624

Anti-Rabies Measures.

TRAPPING, &c., OF BATS.

No. of locations inspected for roosts of bats	...	...	30,638
BATS CAUGHT.			
Artibeus	...	...	192
Desmodus	...	...	—
*Hemiderma	...	...	134
Molossus	...	...	25
Noctilio Leporinus	...	...	—
Saccopteryx	...	...	10
			361

* Besides these, 24 Hemiderma were caught outside the City limits.

Building Plans, etc.

Reports made by the Public Health Department were as follows:—

	No.
On plans, &c., for reconstruction or reconditioning of buildings	... 248
On applications for leases of land in Woodbrook	... 33
On premises in which building operations were in progress	... 226
On applications for certificate of completion of buildings	... 14

Prosecutions.

Offences.	No. of Cases.	Total Fines, &c.
Failing to comply with nuisance notices	... 4	\$14.90
	1	Reprimanded.
Failing to provide proper dustbins	... 1	Reprimanded.

Financial.

	1942	1941
Revenue collected by Public Health Department	... \$ 716.11	\$ 696.59
Expenditure (Staff, Labour, Materials, &c.)	... 62,495.98	64,224.33

Changes in the Staff.

Three vacancies in the Staff of the Public Health Department were filled by the following Appointments, with effect as from 1st April, 1943:—

E. A. Richards	...	...	...	...	Sanitary Inspector.
Goulbourne Forde	...	...	...	...	do.
Leo St. Cyr	...	...	...	...	do.

Leave of Absence.

Officers.	Vacation Leave.	Sick Leave.
	No. of Days.	No. of Days.
Ashe, G.—Sanitary Inspector	... 168	—
Barker, S.—Overseer	... 21	—
Guppy, N. E.—Sanitary Inspector	... 119	—
Hinkson, M.—Sanitary Inspector	... 28	—
Howard, J. R.—Sanitary Inspector	... 21	—
Mitchell, T. M.—Chief Clerk	... 168	60
Parris, J. E.—Overseer	... 21	—
Rivers, F. B.—Sanitary Inspector	... 28	31
Seon, F.—Sanitary Inspector	... 14	14
Wilson, Ivan—Sanitary Inspector	... 28	—
Wood, J. A.—Sanitary Inspector	... 42	7

Acknowledgments.

In times that are difficult and in circumstances that impose great mental and physical strain on all, I have the honour to acknowledge the loyal co-operation and unflagging devotion to duty of each and every member of the staff, both indoor and outdoor, guided and directed by Mr. T. M. Mitchell, Cert. R.SAN. Ins., and Mr. O. E. Forde, Cert. R.SAN. Ins., Chief Clerk and Chief Sanitary Inspector, respectively.

With both permanent and temporary staff short, by pulling our weight together and bringing out the little extra that was necessary, we were able to maintain a not unsatisfactory standard of health in the Urban Sanitary District. For this I am grateful and I record thanks; if any further exhortations were necessary I say, let each and every member of the Public Health Department continue to take pride in his work and so reap the mental satisfaction, which no money can buy, of a day's work well done.

I commend their valuable services to the favourable notice of the Local Authority.

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